

SONGS OF THE HUMPBACK WHALE

UNCOVERING WHAT WE KNOW ABOUT ONE OF THE OCEAN'S GREATEST MYSTERIES

Male humpback whales (*Megaptera novaeangliae*) produce incredibly long, complex songs during the humpback whale breeding season.¹

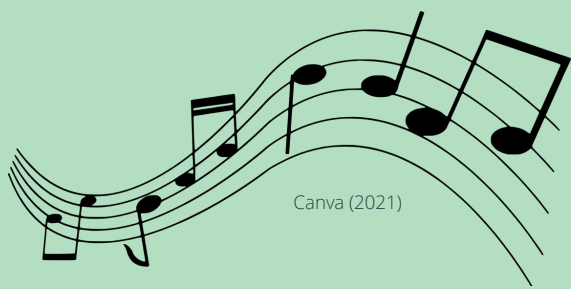
These songs are incredibly beautiful - and perplexing! We still don't know why humpback whales sing, but some research suggests that songs may play a role in mating practices.²



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WHEN DO THEY SING?

Breeding seasons usually run from January to April after an extensive period of migration.¹



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Only male humpback whales are known to sing.³ They also prefer to sing alone, and are often found several kilometres away from other whales.^{3,4,5}

Songs tend to remain the same over the course of a single breeding season, but have been observed to change year-to-year.⁶

HOW DO WE STUDY SONGS?

There are three main methods of studying humpback whale song that are often combined together.⁷

Photographic identification

Behavioural observation

Theodolite (location-based) tracking



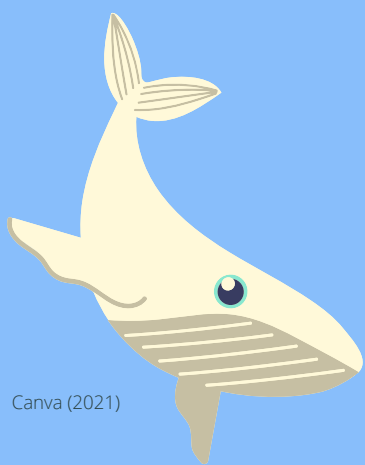
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Song data can be turned into spectrographs (transcribed sound recordings) that identify the various wavelengths and patterns associated with humpback whale songs.¹

IS BREEDING REALLY INVOLVED?

Maybe! Most current evidence suggests humpback whale songs play some role in breeding. Social roles and sexual maturity are known to affect some aspects of humpback whale song.⁸

Most songs are also typically observed near winter breeding grounds, which suggests that song plays a role in increased reproductive fitness among males.^{3,4,5}

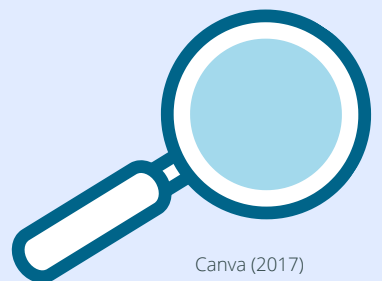


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THERE'S SO MUCH WE DON'T KNOW...WHAT'S NEXT?

Researchers are still looking into the purpose of humpback whale song - and there are many exciting future areas of study!

The influence of reproductive success is a key lead that will help us uncover even more about this mysterious behaviour.



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References

1. Payne, R. S., & McVay, S. (1971). Songs of humpback whales. *Science*, 173(3997), 585-597. <https://doi.org/10.1126/science.173.3997.585>
2. Herman, L. M. (2017). The multiple functions of male song within the humpback whale (*Megaptera novaeangliae*) mating system: Review, evaluation, and synthesis. *Biological Reviews*, 92(3), 1795-1818. <https://doi.org/10.1111/brv.12309>
3. Tyack, P. (1981). Interactions between singing Hawaiian humpback whales and conspecifics nearby. *Behavioral Ecology and Sociobiology*, 8(2), 105-116. <https://doi.org/10.1007/BF00300822>
4. Darling, J. D., & Bérubé, M. (2001). Interactions of singing humpback whales with other males. *Marine Mammal Science*, 17(3), 570-584. <https://doi.org/10.1111/j.1748-7692.2001.tb01005.x>
5. Darling, J. D., Jones, M. E., & Nicklin, C. P. (2006). Humpback whale songs: Do they organize males during the breeding season? *Behaviour*, 143(9), 1051-1101. <https://doi.org/10.1163/156853906778607381>
6. Winn, H. E., & Winn, L. K. (1978). The song of the humpback whale *Megaptera novaeangliae* in the West Indies. *Marine Biology*, 47(2), 97-114. <https://doi.org/10.1007/BF00395631>
7. Helweg, D. A., Frankel, A. S., Mobley, J. R., & Herman, L. M. (1992). Humpback whale song: Our current understanding. In J. A. Thomas, R. A. Kastelein, & A. Y. Supin (Eds.), *Marine Mammal Sensory Systems* (pp. 459-483). Springer US. https://doi.org/10.1007/978-1-4615-3406-8_32
8. Herman, L. M. (2017). The multiple functions of male song within the humpback whale (*Megaptera novaeangliae*) mating system: Review, evaluation, and synthesis. *Biological Reviews*, 92(3), 1795-1818. <https://doi.org/10.1111/brv.12309>